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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,730	09/30/2004	Soshu Kiriara	M1071.1920	9942

32172 7590 04/15/2008

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EXAMINER

BALDWIN, GORDON

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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04/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/509,730	Applicant(s) KIRIHARA ET AL.	
	Examiner GORDON R. BALDWIN	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 9-12 are rejected under 35 U.S.C. 102(b) as anticipated over Kabushiki (EP 1085352).

Consider claims 1-6 and 9-12, Kabushi teaches a porous body having a plurality of regions (2) formed in a porous body (polyimide (considered to be a resin) Para. 80-82), and loaded with a substance, and the regions have an average periodicity. (Claim 1) There are multiple features that may be considered to be a “conductive film”. One of them is a copper film that is bonded to the porous body (Para. 0159). Additionally, the surface of the pores are coated with a compound of a metal complex (Para. 0083) in addition to the end face being taught to be coated with Ag, Au, Pt or solder (Para. 0093) The claims do not specify any spatial or structural relationship between the two substances and the conductive films, therefore the pores of EP 352 are considered the “periodic structure” in that the pores are distributed with a specific periodicity.

EP 352 teaches the claimed structure with the same materials, therefore the resistivity and conductivity is also considered to be taught, because the same structure

with the same materials would produce similar characteristics, such as resistivity and conductivity.

Additionally, the copper is formed on the surface of the porous body by a method commensurate with that taught by the applicant (electroless plating) the characteristics thereof are expected to be similar, such as distribution of particles and resistivity and conductivity. (Para. 87)

As for the diamond shape claimed by the applicant, the description given by the applicant of this shape in the specification (Page 5, lines 5-9) does not specifically limit the shape to a “diamond shape”. Therefore, with this lack of a specific definition, any shape can be considered a diamond shape.

Claims 1-5, 7, 9-11 and 13 are rejected under 35 U.S.C. 102(a) as being anticipated by Zakhidov (U.S. Pat. No. 6,261,469).

Consider claims 1-5, 7, 9-11 and 13, Zakhidov discloses a three dimensional periodic structure with a structure that teaches graphite sheets can be oriented into a cubic diamond structure (with air being the other substance). Zakhidov also discloses that a conductive metal film of Au is applied to the structure by chemical vapor deposition, and the film of conductive material is preferably aggregated together (in the structure) to form a mechanically robust structure (with uncoated regions existing), thereby teaching the film in a particle or cluster form. (Col. 11, line 64-Col. 13, line 45)

Zakhidov teaches the claimed structure with the same materials, therefore the resistivity and conductivity is also considered to be taught, because the same structure

with the same materials would produce similar characteristics, such as resistivity and conductivity.

Response to Arguments

The double patenting rejection of claim 2 with U.S. Patent No. 6,998,942 is withdrawn due to the filing of the terminal disclaimer by the applicant.

Applicant's arguments regarding the 35 U.S.C. 102 rejections filed 12/28/2007 have been fully considered but they are not persuasive.

Regarding the Kabushiki rejection, the claim that Kabushiki discloses a plurality of conductive particles that are not coarsely distributed is not persuasive because the applicant has not defined what "coarsely distributed" is in the specification. The term "coarsely distributed" is considered to be a relative term and there is nothing disclosed by the applicant as to how the applicant's claimed invention is coarsely distributed compared to the prior art of Kabushiki. The claim language is being given its broadest reasonable interpretation and since the conductive film has Cu particles, there are also considered to be gaps and spaces between these particles, therefore Kabushiki is considered to have coarsely distributed conductive particles.

Additionally, the applicant is not claiming a discontinuous plurality of conductive particles, but coarsely distributed particles. Kabushiki disclosed the same method of applying the film as the applicant, namely electroless plating. This aspect is considered to have substantial weight because Kabushiki uses the same process to attach the particle containing film, namely electroless plating, as the applicant.

Regarding the Zakhidov rejection, the claim that Zakhidov discloses a plurality of conductive particles that are not coarsely distributed is not persuasive because the applicant has not defined what "coarsely distributed" is in the specification. The term "coarsely distributed" is considered to be a relative term and there is nothing disclosed by the applicant as to how the applicant's claimed invention is coarsely distributed compared to the prior art of Zakhidov. The claim language is being given its broadest reasonable interpretation and since the conductive film has Au particles, there are going to be gaps and spaces between these particles, especially since the Cl_4 will be missing from the Au Cl_4 after it is deposited, therefore Zakhidov is considered to have as coarsely distributed conductive particles as the applicant in view of the claim language.

Additionally, this rejection is further anchored by the fact that the applicant is not claiming a discontinuous distribution of particles, but coarsely distributed conductive particles. Even though Zakhidov discloses a patch coating of Au, these are Au particles and there are going to be gaps and spaces between the particles, rather than a fluid, unbroken film of Au. Therefore, these Au particles are considered to be coarsely distributed under the broadest reasonable interpretation of the claim language of the applicant's invention.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GORDON R. BALDWIN whose telephone number is (571)272-5166. The examiner can normally be reached on M-F 7:45-5:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on 571-272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GRB

/Timothy M. Speer/
Primary Examiner
Art Unit 1794